

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: **Tadayuki KAMEYAMA et al.**

Group Art Unit: **1792**

Application Number: **10/522,618**

Examiner: **Nathan H. EMPIE**

Filed: **January 31, 2005**

Confirmation Number: **6711**

For: **METHOD OF PRODUCING POLARIZING FILM, POLARIZING
FILM PRODUCED BY THE METHOD AND OPTICAL FILM**

Attorney Docket Number: **052009**

Customer Number: **38834**

SUPPLEMENTAL DECLARATION UNDER 37 C.F.R. 1.132

Commissioner for Patents

P. O. Box 1450

Alexandria, VA 22313-1450

Sir:

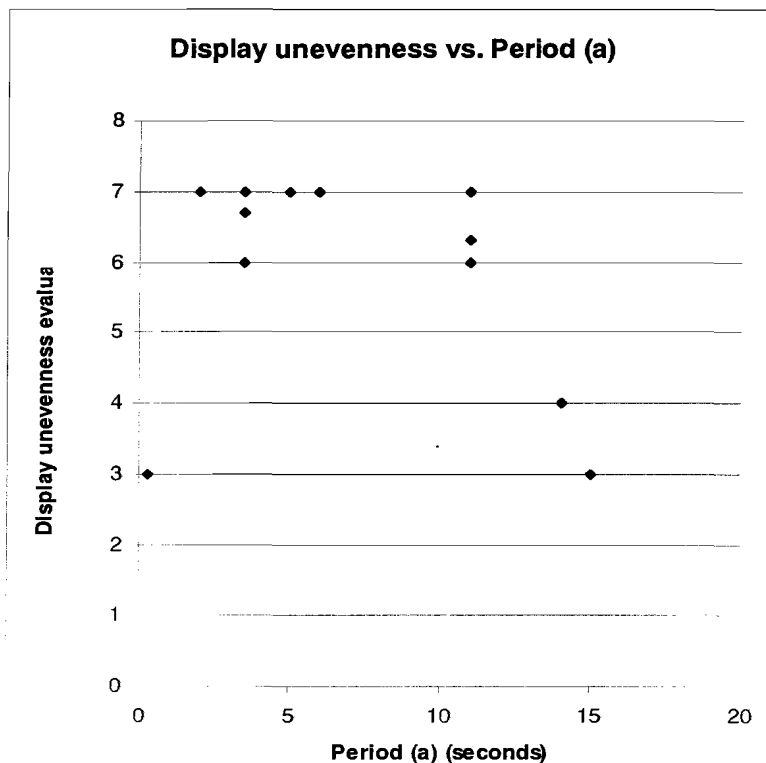
I, Manabu Miyazaki, a citizen of JAPAN, hereby declare and state unequivocally:

1. I am currently employed in the Development Section 3 of the Development Department of the Development Division of the Optical Related Division in Nitto Denko Corporation. I joined Nitto Denko Corporation in April 2006.

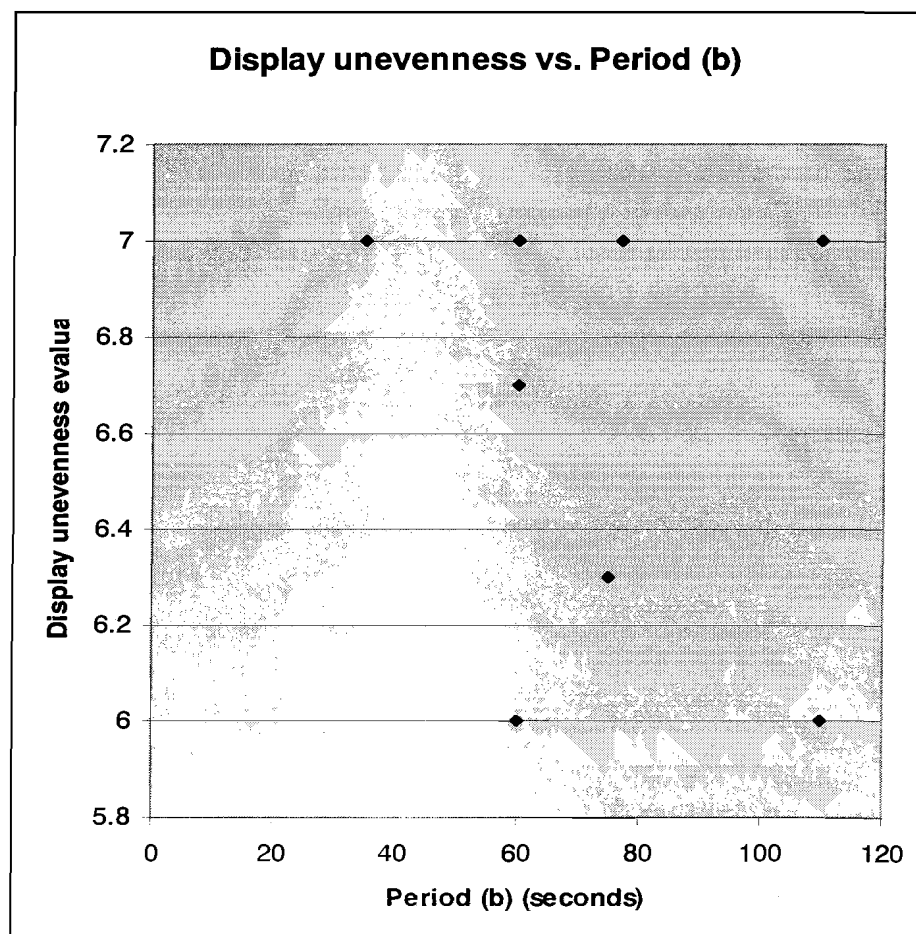
2. I received a master's degree in Osaka University, Graduate School of Engineering Science in 2006.

3. The present supplemental Declaration relates to my Declaration of April 20, 2009 by presenting in graph form with additional explanations and clarifications the experiments and evaluations performed by me or under my supervision and review, and reported in the Table attached to the Declaration of April 20, 2009.

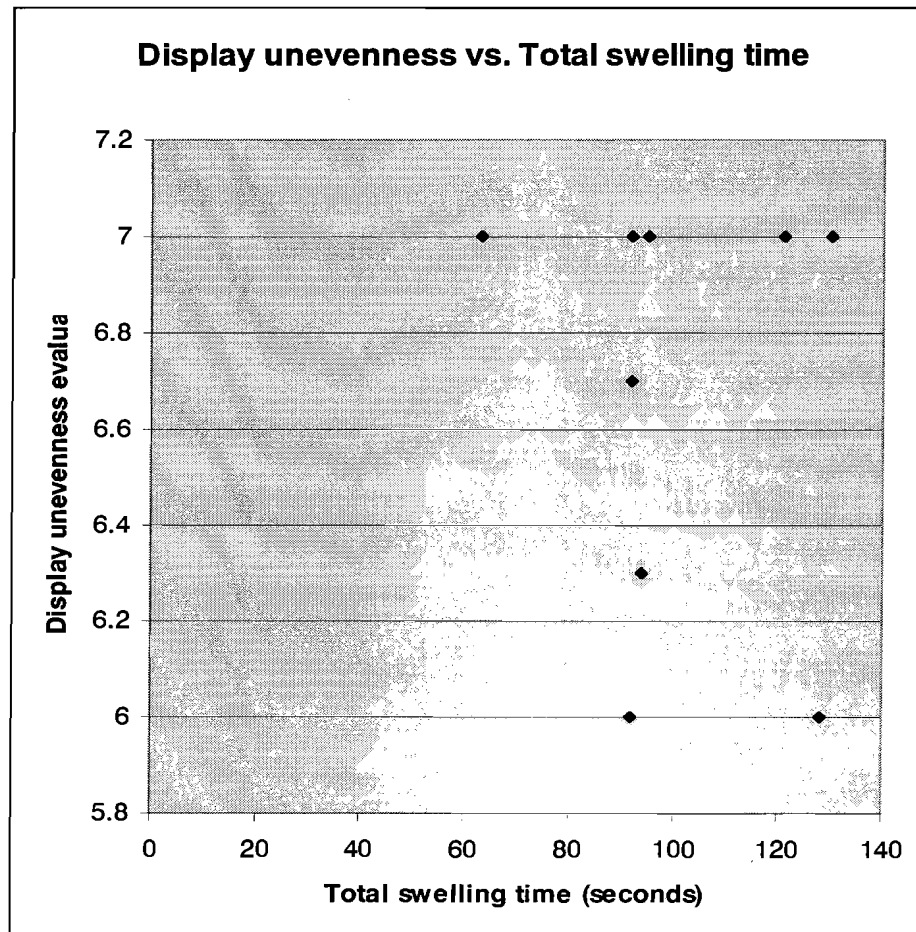
4. Graph 1 below illustrates the surprising and unexpected result that period (a) of 0.6 seconds to 12 seconds between the time when the polymer film is brought into contact with the aqueous solvent and the time when the polymer film is brought into contact with the first guide roll is critical to display unevenness. As shown in graph 1, experiments with various periods (a) selected throughout values of 2 to 11 seconds consistently resulted in a display unevenness evaluation of at least 6, whereas comparative examples with period (a) of 0.3 seconds, on the one hand, and 14 and 15 seconds, on the other hand, resulted in a display unevenness evaluation of at most 4.



5. Graph 2 illustrates the distribution of the experiments exemplifying the present invention throughout the range of 13 to 120 second for period (b) between the time when the polymer film is brought into contact with the first guide roll and the time when the polymer film is brought into contact with the second guide roll. As shown in graph 2, the experiments exemplifying the present invention were performed with various period (b) selected throughout values of 35 to 110 seconds, all with a display unevenness of at least 6.



6. Graph 3 illustrates the distribution of the experiments exemplifying the present invention throughout the range of 63 to 130 seconds for the total impregnation time. As shown in the graphs, the experiments exemplifying the present invention were performed with various period (b) selected throughout values of 63 to 130 seconds, all with a display unevenness of at least 6.



7. The experiments and comparative experiments were selected so as to provide a reasonably broad range of experiments to study the effect of period (a) on display unevenness evaluation.

8. In my professional capacity and experience, I found these results sufficient to convince me that a period (a) selected in a range between 0.6 and 12 seconds provides unexpectedly improved results in terms of reduction of display unevenness, when period (b) is selected in a range from 13 to 120 seconds and total impregnation time is from 63 to 130 seconds.

9. Further, I believe that a person of the art would find these experimental results sufficient to be convinced that a period (a) selected in a range from 0.6 to 12 seconds provides unexpectedly improved results in terms of reduction of display unevenness, when period (b) is selected in a range from 13 to 120 seconds and total impregnation time is from 63 to 130 seconds.

10. I have reviewed the publication JP10-153709 ("Ikemoto") cited by the U.S. Examiner but this document uses a total impregnation time of at least 4 minutes. This publication focuses on total impregnation time, and is silent as to an impregnation time up to contacting a first roll. I do not think that this publication would have motivated a person

of the art to inquire on impregnation time up to contact with a first roll, or even to reduce total impregnation time below about 4 minutes. Looking at Fig. 1 of this publication, even though it is extremely diagrammatic, it can be presumed that if a total swelling time is 4 to 6 minutes, then the length of time up to the time when a PVA film is brought into contact with the first roll is about from 1 minute and 20 seconds to 2 minutes. This publication does not suggest or give any hint of the surprising improvement provided by the present invention, as demonstrated in the experimental results discussed here.

The undersigned declares that all statements made herein of his/her own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: October 2, 2009

Signature: Manabu Miyazaki
Manabu Miyazaki